

A B S T R A C T

In a manufacturing process of an image forming apparatus (electron beam device) using electron emission elements, particularly, surface conduction type electron emission elements, wirings on an electron source substrate on which the wirings and element electrodes are formed are opposite to electrodes for a face plate, and a given voltage is applied between the wirings and the electrodes to thereby generate a discharge phenomenon in advance, thus removing a protrusion or the like. In this way, when an electric field applying process is conducted on the electron source substrate, a factor such as a protrusion in an electron source which induces a discharge phenomenon in driving an electron beam device represented by an image forming apparatus is removed, thus realizing an image forming apparatus excellent in display characteristic with no defective pixel even in image display for a long period of time.